

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Device for ~~determination of~~ determining spatial co-ordinates of an object (2) with:

- a projector (3) which projects onto the object (2) a pattern (4) with known projection data,
- a camera (6) which creates an object image (8) of the pattern (4) projected onto the object (2), and with
- a data processing unit (7) connected downstream from the camera (6), which determines spatial co-ordinates of the object (2) from the object image (8) and the known projection data,

characterized in that,

at least one further camera (6) creates a further object image (9) and the data processing unit (7) determines additional spatial co-ordinates of the object (2) from the object images (8, 9) by means of a triangulation method and the pattern (4) contains redundant encoded projection data.

2. (original) Device as claimed in claim 1,

characterized in that,

the pattern (4) contains redundantly-encoded projection data.

3. (currently amended) Device as claimed in claim 1 ~~or 2~~,

characterized in that,

Epipolar lines (16, 17) pass through a plurality of marks of the pattern (4).

4. (currently amended) Device as claimed in ~~one of the claims 1 to 3~~ claim 1,

characterized in that,  
the data processing unit (7) restricts the search for  
corresponding image points ( $S_1$ ,  $S_r$ ) to problem areas in which  
an evaluation of the pattern images (8, 9) only produces an  
erroneous result.

5.(original) Method for determining spatial co-ordinates of an  
object (2) with the following steps:

- Projection of a pattern (4) with known projection data  
onto an object (2);
- Creation of an object image (8) with the aid of a camera  
(6); and
- Determination of the spatial co-ordinates from the known  
projection data in a data processing unit (7),

characterized in that,  
with the aid of a further camera (6) a further object image  
(9) is recorded and that, if the spatial co-ordinates are  
determined incorrectly, additional spatial co-ordinates of the  
object (2) are determined on the basis of the projection data  
and one of the pattern images (8, 9) by searching for  
corresponding image points ( $S_1$ ,  $S_r$ ) in the object images (8, 9)  
and a subsequent triangulation.

6.(original) Method as claimed in claim 5,  
characterized in that,  
corresponding pixels ( $S_1$ ,  $S_r$ ) are searched for along the  
epipolar lines (16, 17).

7.(new) Device as claimed in claim 2,  
characterized in that,  
Epipolar lines (16, 17) pass through a plurality of marks of  
the pattern (4).

8.(new) Device as claimed in claim 2,  
characterized in that,

the data processing unit (7) restricts the search for corresponding image points ( $S_1$ ,  $S_r$ ) to problem areas in which an evaluation of the pattern images (8, 9) only produces an erroneous result.

9.(new) Device as claimed in claim 3,

characterized in that,

the data processing unit (7) restricts the search for corresponding image points ( $S_1$ ,  $S_r$ ) to problem areas in which an evaluation of the pattern images (8, 9) only produces an erroneous result.